

When Liability Becomes Potential: Intermediary Entrepreneurship in Dynamic Market Contexts

by

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Abstract

This paper analyzes how entrepreneurs fare in an intermediary market segment when the segment is closely attached to a single supplier market. While focusing on two structural constraints, organizational structure and competitive pressure, I build off of the fact that in the past thirty years in the U.S. beer industry, as the number of beer producers (i.e. brewers) proliferated, their intermediaries (i.e. wholesalers) declined. Using establishment-level restricted-access economic microdata from the Longitudinal Business Database, I examine what happens with intermediaries when (some) producers start competing on product variety instead of competing on scale. Piecewise exponential survival models show that Stinchcombe's 'liability of newness' principle can get suspended and certain newcomers have better survival chances than industry incumbents. I call this effect the potential of newness under which entrepreneurial establishments fare better if they are part of well-resourced multiunit firms. Furthermore, I show that these resource-rich entrepreneurs benefit from the potential of newness especially in areas with competition-laden history and where the industry experiences shakeouts. For market incumbents, the more competition-laden the history of the local market, the higher the hazards of current time establishment failure. For multiunit entrepreneurs, however, a more competition-laden history of the local market is associated with a decrease in the hazards of current time establishment failure. This paper highlights that market structure not only enables but sometimes traps already existing organizations and make them less adaptive to changing logics of competition. The results highlight how organizational factors and geography create inequalities among intermediary organizations.

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Introduction

This paper highlights how interrelationships across organizational populations affect within-industry competition and organizational survival. The field of population ecology (Carroll and Hannan, 2000; Hannan and Freeman, 1977) has produced a vast number of studies focusing on organizational populations and highlighted the specific competitive conditions under which organizations can thrive. In an overwhelming number of cases, however, these papers took a single industry as the main population of interest and focused less on market dynamics between industry segments. By analyzing how a restructuring of an organizational population affects the competitive conditions of another industry segment, this paper extends the scope of the literature to studying differences across organizations in dynamic environments.

This new focus on dynamics between inter-organizational populations enables me to explain a seeming empirical paradox: over the past thirty years, the population of wholesalers (i.e. distributors) in the beer industry declined while producers (i.e. brewers) proliferated (Figure 1). This empirical puzzle calls for an explanation because in all neighboring industries – such as liquor or wine – there is a positive correlation between the number of wholesalers and producers and common wisdom would also predict that if an industry segment is doing well, it will also produce ample opportunities for businesses in related industry segments to thrive.

This paper focuses on the intermediary market segment of beer wholesalers and what happens to these firms when there is a surge in the number of downstream partners and vertical integration is not an option which means that firms must choose transaction partners from the connected industry segment. Under these conditions, the need to reconcile different interests with firms in those segments presents a strategic problem. When there is such general restructuring in the structure of business relationships – that Barnett (2008) termed as a change in the underlying logic of market competition –, it becomes an open question which intermediaries keep up, get

ahead at an accelerated rate or lose and leave the market. We know that different organizational features do well in different contexts but what this implies is that the potential benefits from maintaining specific relationship strategies may change when there is a general restructuring in a nearby industry segment. Firms that once prospered might find themselves struggling while usually unavailable paths to market entry can open up at the same time.

This paper zooms in on Stinchcombe's liability of newness principle (1965) – which sets up an expectation that industry incumbents do better than newcomers and examine how this theory performs under conditions of asymmetry (Goffman, 1967; Garfinkel, 1967). I outline boundary conditions to this general process by focusing on two structural factors – organizational structure and competitive pressure – in order to investigate conditions under which new establishments unexpectedly fare better compared to established organizations. I focus on these two factors because they might be the best ecological level proxies to measure resources and competition, and to tap into the social mechanism that I argue fuels the change in the underlying logic of market competition and the observed industry level effects.

I call the underlying mechanism differential expectations and use it to describe a temporal pattern in which the logic of competition changes relationships between market segments, a change that can be described as a move from an exclusive dyadic relationship structure to portfolio-oriented diversified networks. When large producers dominate the production landscape, wholesalers develop a single focus as they are in an exclusive relationship with a single producer. The distributor is not more than a 'local eye' of the producer; family with all its benefits and constraints. However, once small-scale producers start to proliferate, wholesalers forge new contracts with the producer entrants and maintain a diverse set of transaction partners. No producer

benefits from the undivided attention of wholesalers anymore and as a consequence, the social baggage embedded in market relationships loosens.

The result of these changes is that expectations of what to gain from getting into a contract with a distributor change, which in turn forces some wholesalers out of the market and might open up ways for others to enter. Classical sociological theory of relationship formation (Simmel, 1908 [1950]) predicts that going from an exclusive relationship to one that has just one additional participant is hard because this change restructures the content of the ties qualitatively. This process that industry incumbents need to go through has two consequences: first, it makes existing incumbents reevaluate whether to further invest in their contracts or drop it (Blau, 1964; Cook and Emerson, 1978), which might result in an increased number of wholesalers going out of business. Second, the changes also offer a potential path for newcomers to the wholesaler segment because they lack the exclusive market ties that would drag them down, which might give them the flexibility to have a diversified producer clientele from the beginning. Overall, the decreasing wholesaler numbers in Figure 1 can mask that some firms still enter the market despite the general downward trend.

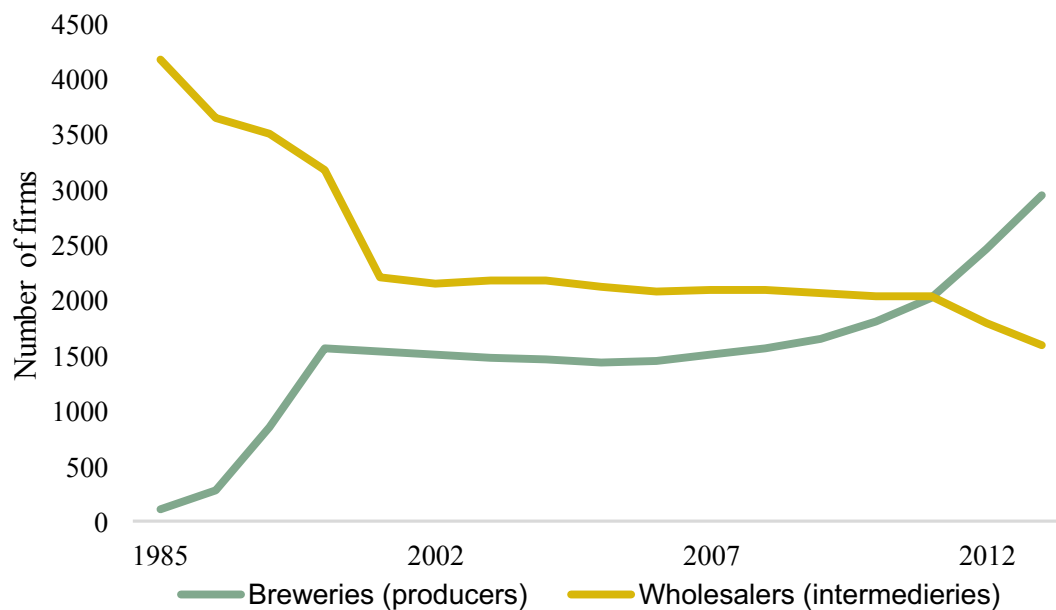
I use establishment-level restricted-access economic microdata from the Longitudinal Business Database between 1983-2014. Piecewise exponential models show that the mechanism of differential expectations affect intermediary entrepreneurs' survival chances in a way that is unexpected based on current theory. Results are consistent with Stinchcombe's liability of newness thesis as long as we do not account for firm structure: the hazards of market exit are higher for entrepreneurs compared to incumbents. However, once we account for the resource environment of organizations and using organizational structure as a proxy for their resources, and distinguish between market entrants who are part of single-unit and multiunit firms, results explicate the

boundary condition under which Stinchcombe's liability of newness can get suspended. I find that multiunit new entrants have higher survival chances compared to both single-unit and multiunit incumbents. I call this effect the potential of newness, which highlights that there are market conditions under which newness can have bigger potential than predicted, based on current theory. Moreover, I show that multiunit entrepreneurs disproportionately benefit from the potential of newness in highly competitive environments and where the industry experienced shakeouts previously. While these historical events lower the survival chances of incumbents, multiunit entrepreneurs experience an increase. I explain this counterintuitive finding using the mechanism of differential expectations: it is easier to create entirely new market ties than change old, socially embedded ones. Multiunit new entrants created diversified portfolios upon arrival while incumbents had to negotiate for the same change in their long-standing market ties. In many cases, incumbents found themselves trapped in contracts that no longer contributed to their organizational survival.

This paper highlights that market relationships are social and that a change in the underlying social logic of market relationships can have industry-changing consequences. The results also highlight that there is need to extend current research frameworks in entrepreneurship that allow studying the phenomenon among intermediaries (or 'non-producers') and in non-technology related fields as well. The resource-rich intermediaries bringing over the resources they acquired in other industry segments do not represent our current thinking on who an entrepreneur is. While recent literature started to take into account the individual-level factors that an entrepreneur brings to the table upon starting a new venture, scholars paid less attention to the social capital and resources of businesses that switch industries. Some of the multiunit firms that were new to the beer wholesaling industry were already seasoned businesses in other industry

segments. However, they needed to realign their resources and set up the technologies to be able to store beer in their warehouses. As such, they did entrepreneurial bricolage, but their available resources made them different from the typical entrepreneurial firm described in the literature.

Figure 1. Number of beer producers and wholesaler firms (1985–2013)



Sources: <http://www.brewersassociation.org/>; Brewers Almanac, 2013

Theory and hypothesis development

Heterogeneity among intermediaries

Earlier research – especially the literature investigating the position of brokerage – has not only demonstrated that these organizations actively use their structural position for future gains but also emphasized that context matters (Aral and Van Alstyne, 2011; Reagans and Zuckerman, 2008). What researchers can still explore – which is a well-known reality for market participants – is that not every broker weighs the same on the market and inequality emerges between intermediaries. The actions of intermediaries not only affect their transaction partners (Levitt and Syverson, 2008; Vedres and Stark, 2010) but also their positions in the market vis-à-vis other

intermediaries (Fleming et al., 2007). One of the most basic gains an organization can realize is survival.

A focus on the social embeddedness of producer-intermediary transactions and their effect on intermediary survival is important because we do not have good theories on what factors contribute to heterogeneity among intermediaries (Sorenson and Rogan, 2014). Producer-intermediary relationships do not live up to the standard assumption most theories make regarding the audience as an omnipresent entity (Zuckerman, 2012; Zuckerman, 2017). There is no audience for business-to-business ties, which make these transactions prone to become ultra-embedded ties (Uzzi, 1997). In those markets when the government sets up a long-term relationship saying that two different types of organizations must work together, what they are effectively doing is they are institutionalizing complementarities into the system. In these markets, ultra-embedded business-to-business ties are expected to have an even stronger embeddedness. This characteristic of business-to-business relationships affects market competition in the long run (Sorenson and Waguespack, 2006).

Several empirical settings showcase the disadvantage of newness. For example, Stinchcombe describes the early years in an organization's life cycle as particularly vulnerable to failure (1965). The viability of organizations can also change during the life course when the context around the organization changes. In the international business literature, scholars talk about the liability of foreignness, to convey the presence of specific obstacles that organizations face, when entering into a geographically new market (Nachum, 2003). Overall, under stable conditions, greater returns can be extracted from already existing market relationships, especially in intermediary markets. I use this principle as the baseline hypothesis in further analyses.

Hypothesis 1 (Baseline): at any given year, the hazard of failure is higher for entrepreneurs than for industry incumbents.

However, much is left to be explained regarding entrepreneurship in intermediary market segments. As the international business literature shows, under certain conditions, the liability of foreignness can be suspended or overcome (Mezias, 2002; Zaheer, 1995), and we can suspect that in other empirical cases when there is an underlying change in the logics of market competition, similar processes can take place. To start off this line of inquiry, I consider two dynamics that I expect have a say in the viability of entrepreneurial ventures among intermediaries: organizational structure and historical competitive pressure.

Organizational Dynamics of Intermediary Entrepreneurship: Accounting for ‘Outside’ Resources

Scholars of organization theory specialize based on whether they look at the supply or the demand side of the market (White, 1981; Zuckerman, 2012; Phillips, 2014). This specialization, however, proves myopic if we want to understand how entrepreneurship is affected by the wider institutional environment and industry structure. Just as researchers criticized the concept of individual level entrepreneurship as ‘blank page’ (Thornton, 1999) for its failure to account for the many ways entrepreneurs use their resources and knowledge from the ‘outside’ upon joining a new industry segment, we can voice the same criticism for the lack of attention to contextual factors as well. Literature that places organizational-level new venture formation back into its institutional context is rare.

Recently, however, scholars started to account for contextual factors, mainly focusing on individual-level characteristics such as social networks and education (Rider, 2012). What remained relatively unexplored is contextualizing entrepreneurship on the organizational level.

Firms that enter a new market segment might already have established a presence in other industries, and with a little bit of recalibration of their efforts, they have a potential to quickly create a presence in the new industry. However, accounting for these factors in research designs has been hard because we usually only have information on the activities of firms in one market segment. I define entrepreneurship as firms entering the specific market segment, irrespective of their earlier history, age, or number of employees. With this definition, I assume that the strategic decision to file an establishment under a new industry code reflects internal changes and counts as an act of bricolage. Just as individuals acquire social capital and resources before becoming entrepreneurs, organizations bring past experiences with them upon entering a new market segment.

The above definition of entrepreneurship creates boundaries around a heterogeneous group of firms who are entering a market segment. We can, however, proxy the resources they are working with by evaluating whether the firm operates only one or multiple plants (establishments). If we assume that multiunit organizations are more abundant in resources than those who only own a single plant, we can outline further expectations regarding the survival chances of these two types of entrepreneurs. I am especially interested in the survival chances of the multiunit entrepreneurs. If distinguishing between single-unit and multiunit organizations works as a good proxy for the richness of resources an organization has at its disposal, we should see differences emerge in the survival chances of single-unit and multiunit organizations at their different life stages, be it entrepreneurship or incumbency.

Hypothesis 2a: at any given year, the hazard of industry exit for establishments that belong to a multiunit firm (of any industry) is lower compared to establishments that belong to a single-unit firm, irrespective of whether they are entrepreneurs or incumbents.

Hypothesis 2a serves rather a validity check, but it enables me to outline my expectation regarding the survival chances of multiunit entrepreneurs compared to industry incumbents. Recall that if we do not know anything about the resource environment of entrepreneurs, on average, we can expect them to have lower survival chances than industry incumbents based on Stinchcombe's liability of newness principle. However, in markets where relationship asymmetry presents a problem, and the underlying social embeddedness of market transactions is undergoing a fundamental change, multiunit newcomers can find themselves in a position in which they have greater flexibility to outline a strategy that aligns with the new conditions of market competition. Under these conditions of relationship asymmetry, the flexibility of entrepreneurship can provide an advantage to survival. I call this the potential of newness hypothesis.

Hypothesis 2b: at any given year, the hazard of industry segment exit is lower for entrepreneurs that belong to a multiunit firm (of any industry) compared to multiunit industry incumbents.

This view of entrepreneurship enables me to consider newcomers to a new market segment as entrepreneurs and account for whether they already had a presence in other parts of the economy. Although these organizations might start from a completely different resource-base than firms that are only setting up shop for the first time, nevertheless they are entering a new market, and are subject to the liability of newness. However, their organizational resources might help overcome the liability of the constraints that come from their industry position.

This view emphasizes an extension to the definition of firm entrepreneurship. Scholarship has historically talked about entrepreneurship as a producer-side phenomenon yet there are many market segments in which firms do not 'produce' in the conventional sense of the term. Entrepreneurs and entrepreneurial ventures must produce something tangible to be called

entrepreneurs. Intermediaries, however, do not create products. Beer wholesalers, for example, move beer boxes, manage inventories and build brands. There is a clear need to talk about entrepreneurial ventures in the “low-tech” (Puri and Zarutskie, 2012), and “non-sexy” (Porter, 2008) industries as well.

Intermediary Entrepreneurship under competitive pressure: Accounting for Competitive History

Sociological literature on entrepreneurial dynamics has always tried to contextualize entrepreneurial activity to study the source of opportunities and challenges (Stinchcombe, 1965). We know that large-scale structures affect the type of entrepreneurship that is feasible (Aldrich and Wiedenmayer, 1993; Doering, 2016; Haveman et al., 2012; Thornton, 1999). However, the empirical scope of most entrepreneurship research prevented sociologists from studying the effects of changing market orientations on organizational foundings because they selected homogeneous samples on these factors (Shane and Venkataraman, 2000). My initial focus on the dynamics between two industry segments allows me to highlight how historical competitive pressure interacting with organizational factors carve out distinct market positions for organizations that can affect their viability.

Firms are affected by what is happening to other firms of their industry in their physical proximity. How the industry is doing in certain geographic areas, and the history of competition on different geographical scales will have consequences on current-time market conditions. Population ecology has long maintained that the effects of competition can be best measured locally (Lomi 1995; Bigelow et al., 1997) and the structure of many industries in the United States facilitate this level of analysis. It is the state and local governments who regulate. In the brewing industry, wholesalers get a license from the state; in most places, distribution rights have a further

spatial boundary, usually around county barriers. Thus, how fellow industry members are doing within these spatial boundaries is much more indicative of an organization's further success than how distant organizations are doing. Thus, I expect that:

Hypothesis 3a: at any given year, there is a positive relationship between historical competitive pressure and establishment dissolution. The more competition-laden the history of the local market (county), the higher the hazards of establishment failure in current time.

Arguments could be made, however, that it is not the competition-laden nature of history that matters. Rather, it might be the unpredictability of the market conditions in a given geographic locale that affects organizations. Market uncertainty in the brewing industry stems from interventions from producers. As a reaction to the changing market logic, several large-scale breweries economized their wholesaler fleets and prompted the exiting of many of their wholesalers. For example, Miller¹ reduced the number of its wholesalers by 40%, from 685 to 400 (Beer Marketer's Insights, 06/05/1995). Similarly, Anheuser-Busch attempted to keep only on the largest 300 of its wholesalers (Beer Business Daily, 01/20/2005). The qualitative evidence indicates that high levels of fluctuation in recent history can signal a shakeout effect and previous large-scale wholesaler exit can provide a temporary shield to the remaining market participants. Thus, I expect that:

Hypothesis 3b: at any given year, the larger the fluctuation of local competitive pressure, the smaller the hazards of establishment failure are in current time.

The spatial differences in firm locations and the composition of geographic clusters contribute to the outcomes of market competition and conditions of market entry (Delgado et al.,

¹ Throughout this article when I single out firms, I never use information from the Census microdata, only from other sources such as in-depth interviews or industry periodicals.

2012; Porter, 2000). While economic geographers emphasize the importance of industry clusters (Saxenian, 1996), management research has investigated the conditions that produce differential returns for organizations that are in the same agglomeration (Delgado, Porter, and Stern, 2012; Audia and Rider, 2010; Stuart and Sorenson, 2003). Moreover, research empirically demonstrated the idea that because entrepreneurs rely more heavily on social support networks to start new ventures (Stinchcombe, 1965), they tend to create firms in their locale (Sorenson and Audia, 2000; Dahl and Sorenson, 2012) and in places that already host firms of their kind (McEvily and Zaheer, 1999; Cattani et al., 2003). These results suggest that the effect of the historical conditions of market competition on establishment survival is expected to vary for incumbents and new entrants.

Hypothesis 4 (Baseline): at any given year, the effect of historical competitive pressure differently affects the survival chances of market incumbents and entrepreneurs. For industry incumbents, the higher the competitive pressure, the more likely the market exit. For entrepreneurs, this effect is less pronounced.

Expectations from Hypothesis 4a disregard the heterogeneous resource-pool that market entrants are bringing into the industry segment. Based on the potential of newness thesis, however, I expect that the survival chances of single-unit and multiunit entrepreneurs differ in an environment with competitive history. I expect that earlier literature's finding that entrepreneurs move to places with dense industry presence only applies to the resource-rich multiunit entrepreneurs. Thus, I expect that:

Hypothesis 4a: Higher competitive pressure is associated with a decrease in the hazards of establishment failure only for multiunit entrepreneurs.

Thus, resource-rich multiunit entrepreneurs benefit from the potential of newness especially in areas with competition-laden history. This hypothesis might look counterintuitive for

the first time. In light of the presented theory, however, it can happen if the newcomer organizations are offering something new that the already existing organizations can not. This requirement is fulfilled under the conditions of relationship asymmetry in dynamic market contexts, when the value of long-standing market ties changes for market incumbents, and they find themselves trapped in contracts that no longer contribute to their organizational survival.

Finally, I outline an expectation regarding the differential effect of fluctuation in competitive pressure on establishment dissolution by the potential of newness. Recall that Hypothesis 3b outlines an expectation that shakeouts can have a cleansing effect, temporarily lowering the hazards of establishment dissolution after sudden waves of market exit. If our prediction about Hypothesis 4b is also supported, outlining the existence of differential effects of industry conditions based on organizational factors, then we can set up a corollary expectation regarding the differential effect of fluctuation on establishment exit. We expect that multiunit organizations are entering the market with a different business plan, or have the flexibility to respond to changing logics of competition in the segment, and able to overcome the liability of newness.

Hypothesis 4b: the shielding effect of historical pressure is most pronounced for multiunit entrepreneurs.

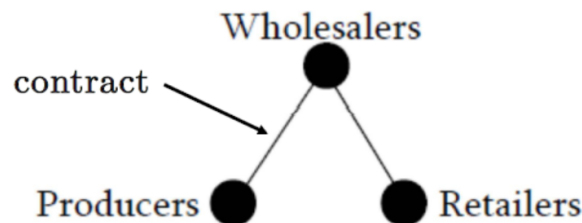
The last three hypotheses highlight that a market structure not only enables but sometimes traps already existing organizations and make them less adaptive to changing logics of competition. Different organizational features can do well in different contexts and the potential of different market strategies rises and falls in importance as logics of competition shift over time (Barnett, 2008).

Research setting

The Middle-Tier in a Three-tier System: Beer Wholesalers

The distribution segment of beer industry provides the context for studying how entrepreneurs in intermediary market segments fare compared to industry incumbents and how organizational factors and historical competitive conditions this process. The three-tier system was set up in 1933 when Prohibition ended. Although the political fight against alcohol seemed to come to an end with the 21st amendment officially repealing the 18th amendment, the forces behind the Prohibition movement did not disappear at once. Politicians ratified the three-tier system of beer distribution in hopes to keep a close eye on beer distribution. They implemented a system that created firm boundaries around producers, wholesalers, and retailers (Figure 3).

Figure 3: The three-tier system of beer distribution



As opposed to wine and liquor distributors, wholesalers of beer became a separate market segment on their own. Government regulations set up restrictions on vertical integration so a producer cannot legally own a wholesaler to date. The federal regulations created an independent wholesale segment and solidified boundaries around the beer industry. Since then, alcohol regulation of other beverages – wine and spirits – works separately. The three-tier system provided the federal government with a source of taxation not only from brewers – they have been paying taxes since 1867 – but also from wholesalers (Mittelman, 2008). To date, taxation of the beer industry is handled on the federal level, while actual regulation happens in state and local

governments. These historical conditions made beer distribution a suitable laboratory for my purposes.

Although the three-tier system has three main positions, this paper singles out the brewer–wholesaler relationship. There are multiple reasons for this. Contracts between producers and wholesalers are hard to replace because franchise law protects them in most states (Blair and Lafontaine, 2005). There are no such protections on contracts between retailers and wholesalers. Moreover, the focus of this paper is to look at how the change in relationship asymmetry affected the brewer–wholesaler relationship not in the wholesaler–retailer relationship. Historically, wholesale–retailer relationships have been many-to-many relationships, and this did not change in the examined period, so the theories I use do not make it feasible to outline expectations. Third, resource partitioning theory has provided a fertile ground to understand processes of competition among producers. This paper aims to build on these efforts by focusing on the market dynamics between producers and their wholesalers. For the outlined three reasons, I study only the producer–wholesaler relationship in the three-tier system.

Furthermore, a focus on the brewer–wholesaler relationship is necessary because of its political consequences. In the brewing industry, the triad of tiers provided remarkably stable conditions as incumbents have been active to preserve and strengthen their institutionalized positions. Thus, they successfully maintained this arcane system of alcohol distribution in the past 80 years despite the general triumph of the free market idea over the 20th century. The institution itself, however, did not make distributors indispensable; their continued strategic action did. During the past 80 years, the market managed to reconfigure itself multiple times. The latest one was due to the mass entry of small-scale producer firms starting in the 1980s when these new

producers changed the market logic and started competing on product variety instead of competing on scale.

At the scale of my study, conditions of relationship asymmetry posed a problem to market participants even if there are some exceptions in the system that allow certain producers to avoid contracts with a wholesaler. Some states, especially after small craft labels set up industry associations to lobby for their interests, introduced regulations that allow producers to self-distribute up to a certain size, and bypass wholesalers. Unstructured qualitative interviews I conducted with several industry participants, however, show that small microbreweries do not find it feasible to distribute beer once they pass a certain size. Brewers use economies of scale arguments to argue why they opt for a wholesaler instead of managing their accounts in-house (see example quotes in Appendix A). Moreover, a statistic cited by industry incumbents at a national conference shows that in San Diego – which is one of the craft brewery hotspots – three-tier exceptions accounted for only 4% of the total beer business locally in 2016. Overall, qualitative evidence indicates that although three-tier exceptions are growing, they should not significantly affect the macro results of my study.

Changing Logics of Competition

Most empirical accounts in organization theory that focus on producer–intermediary relationships in market contexts, even if they use longitudinal data, assume stability in the underlying logic of competition. Examples include investment banks (Eccles and Crane, 1988), high-skill staffers (Fernandez-Mateo, 2007), real estate agents (Levitt and Syverson, 2008), independent country music producers (Lingo and O'Mahony, 2010), financial intermediaries (Abolafia, 1996), biotechnology firms (Stuart et al., 2007), talent agencies (Bielby and Bielby, 1999), film distributors (Sorenson & Waguespack, 2006), and consultants (Bessant and Rush,

1995). By comparison, I examine a market in which there was a change in the underlying logic of competition: the producer segment starts competing on product quality instead of scale, which necessitated a fundamental restructuring of the social logic underlying market relationships as well.

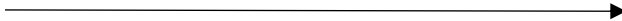
I outline the mechanism of *differential expectations* and use it as a shorthand to talk about the relationship asymmetry that emerged as the result of the change in the logic of competition between the two market segments. This restructuring can be summarized as follows. Before the 1980s, only a handful of breweries were on the market, and each had an army of distributors. Wholesalers were local eyes of brewers' interests. Producer entrepreneurs that entered the market in increasing numbers after the 1980s, however, were already locally grounded organizations; they did not need local eyes. Instead of customizing their products to local needs, they needed distributors to scale up their products. Moreover, they could only afford a small number of franchise law-protected wholesaler contracts. Large breweries also attempted to set up incentive programs to keep their wholesalers exclusive to them, which made it even harder for new entrants to find wholesalers willing to distribute their products. Interestingly, newcomer small breweries had an incentive to opt for large wholesalers who could make their products available in distant markets.

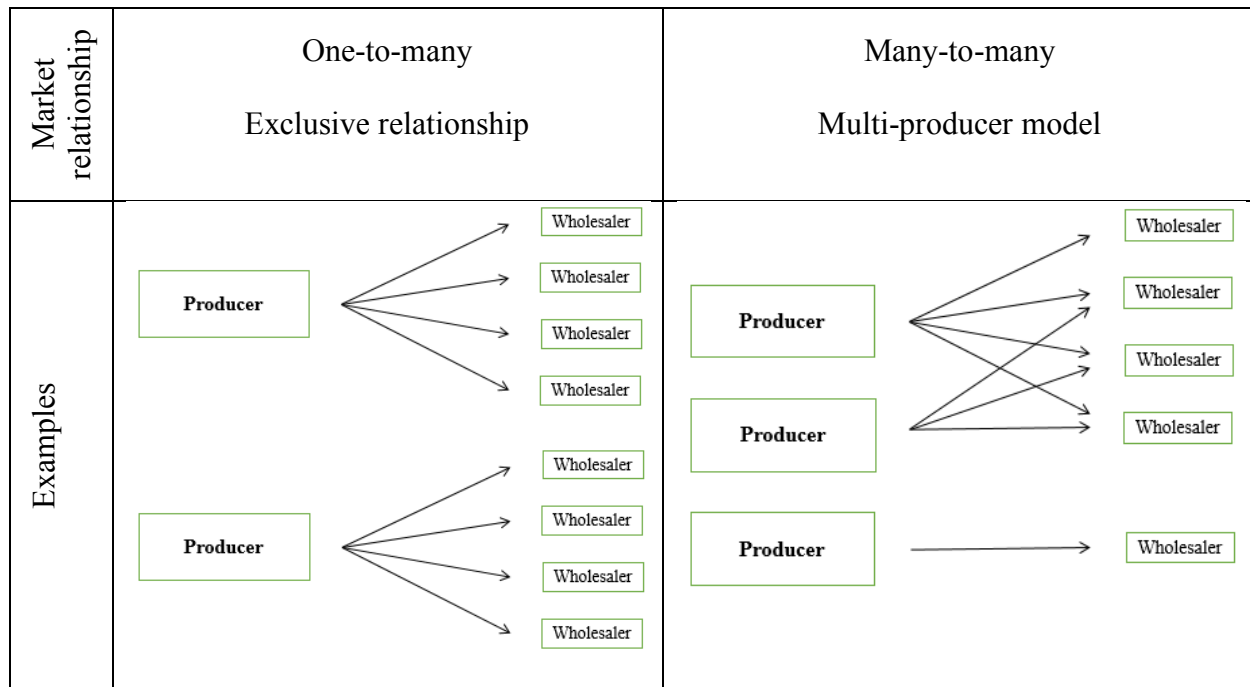
Research partitioning theory offered a compelling explanation for this producer-side market dynamics (Carroll and Swaminathan, 2000) and even predicted it even before its emergence (Carroll, 1985). In their explanation to and analysis of deconcentration of the producer segment, however, these scholars did not pay attention to the roles wholesalers played in shaping market processes. With the increased presence of small-scale breweries, the expectations of what makes a good wholesaler changed. As already existing wholesalers faced uncertainty about the

quality of new producer entrants, they did not immediately hurry to represent microbreweries, as they could not just add the small breweries' products to their fleet without restructuring their business models. They already had existing market ties to larger breweries cemented by mutual trust and the social costs of breaking these exclusive ties were large. In some cases, macro producers also incentivized wholesalers to stay loyal and exclusive to them. These processes highlight Simmel's observation on the potential difficulties of extending an exclusive dyadic relationship to a third (or fourth or fifth party). According to theory, the change from an exclusive relationship to a multi-producer model is qualitatively more important than further increases in the network (Simmel, 1908 [1950]). It required time for wholesalers to separate their interests from the large brewers' and extend their portfolio to carry microbrews. This time-lag is what, under conditions of relationship asymmetry, could present new entrants with an opportunity.

In sum, I propose that the inverse trend of growth and consolidation on the producer and wholesaler sides of the brewing industry are connected, and we can only understand this connection if we consider the underlying social logic of market relationships. As the logics of competition changed, market participants created and maintained ties in an environment in which one segment is growing while the other segment is consolidating. As the one-to-many nature of market ties changed to many-to-many (Table 1), it produced differential expectations by the two participants toward their market relationship. Because of the negotiated process between producers and wholesalers who are acting under the legal constraints in their industry, one can expect significant differences to emerge among intermediaries (Ryall and Sorenson, 2007). These emerging differences are the focus of this paper.

Table 1: Hypothesized effects of increased producer entry on the asymmetry of market relationships

	<div style="text-align: center;"> Time dimension  </div>
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Empirical design

Data

Testing hypotheses about the spatial and organizational effects of entrepreneurship in an intermediary market segment requires population data of an entire industry segment. I used longitudinal data between 1982-2009 that covers the entire beer wholesaling industry. I extracted the data from the Longitudinal Business Database (LBD, 1976-2013, yearly). The LBD is a complete annual roster of all private business establishments/plants with at least one employee. The dataset is a Census Bureau's effort to provide high-quality data based on business surveys and federal taxation records. It is the single most comprehensive dataset that covers the entire U.S. economy's recent history.

Characteristics of the dataset. Besides reaching the whole population, the dataset is uniquely collected at the establishment level. An establishment is a physical location, while a plant or firm can consist of either a single or multiple establishments. The dataset includes cross-

sectional firm and longitudinal plant identifiers. This variable allows me to identify multiple establishments within the same year who belong to the same firm, and follow establishments over time as well. Firm and establishment identifiers have been implemented in most Census datasets and are crucial to being able to distinguish establishments; from those of a newcomer firm in the industry segment to those of establishment takeovers, when a firm that already set foot in the industry segment opens an existing plant (Autor et al., 2007; Haltiwanger et al., 2010; Decker et al., 2014)². Overall, focusing on the establishment-level advances earlier literature on firm dynamics. Moreover, by creating a dataset in which each observation corresponds to a year in an establishment's life, I can allow variables that are usually considered stable characteristics of organizations to vary across time.

Industry definition. A focus on a single industry segment – beer wholesaler businesses – using Census microdata is rare because datasets at this scale have primarily been used to study the whole economy. Notable exceptions are Hortaçsu and Syverson (2007) who focus on the cement industry and the ready-mixed concrete industry segments to study the effects of vertical integration on firm productivity and finds evidence that integrated firms enjoy a productivity advantage. Defining the boundaries around an industry segment is a contentious decision.³ I used the industry code classification system (NAICS) to include every establishment that reports that they belong to code 424810, “beer & ale merchant wholesalers.” Although the Census only implemented this classification system in 2002, researchers assigned these codes to establishments in earlier years. The retroactive work was necessary due to the classification system change, where several

² The only administrative data that can achieve more than this is linked employer-employee data, which have the potential to identify mergers and spinoffs (Benedetto et al., 2007).

³ Working with administrative data necessitates the use of industry codes. However, industry participants hold other definitions as well. I tried to account for other, competing definitions by reaching out to the chief economist of the National Beer Wholesaler Association and getting to know the methods they use to measure the industry that they lobby for.

establishments got reclassified. With these consistent new codes, the boundaries around the beer wholesaling industry segment stayed consistent during the examined period (Fort and Klimek, 2016).

Final sample. The final sample implemented three constraints. First, it only includes establishments that were on the market between the periods of 1983 and 2013 in the LBD. I chose 1983 as the starting year because the number of breweries starts to increase that year. I chose 2013 as the ending date for my analysis because that is currently the latest year in which I can detect establishment failure, and identify those establishments who did not file as beer wholesalers in 2014. Second, I restricted the research sample to establishments that operated in the 50 contiguous U.S. states and Washington D.C. Third, for the main analysis, I disregarded establishments that ‘reborn’ during the examined period, meaning that after being registered in the LBD they disappear for a couple of years only to reappear later. As the extent of this behavior is not widespread (only a small number of organizations can be characterized as ‘reborn’) yet the possible reasons for this pattern are many, I disregarded them from further analyses.

Measures

Establishment Dissolution. The main dependent variable was an establishment’s ceasing to appear in the dataset the next year. The variable to measure exit from the industry segment was defined as 1, if an establishment is present in year t , but not in year $t+1$. If an establishment changed ownership and a different firm bought it, it was not considered as an establishment-level exit as activities in the location continue (Dunne et al., 2013). In such cases, the establishment keeps its unique identification number; but its firm identification number changes. Overall, establishment dissolution measured if the establishment ceased to be associated with a firm that belongs to the beer wholesaling industry in the following year. Emphasizing ‘next year’ was important because

using this definition did not necessitate lagging the independent variables as they indicate current-year measures.

Independent variables: *Entrepreneurship*. This variable distinguished between incumbents, new establishments, and establishments that got taken over by a different firm. I considered new establishments owned by firms as entrepreneurs in their first four years of existence following Delgado, Porter, and Stern (2012). I defined incumbent establishments older than four years owned by the same firm in $t-1$. A takeover was defined when an establishment changed owners from $t-1$ to t , irrespective of its age. One of the biggest strength of the LBD dataset was that I could distinguish between new establishment formation by a new firm and several forms of a market takeover, because I suspected that the spatial and organizational dynamics are differently affecting these two types of new establishments. Although formulating hypotheses about takeovers was not the main goal of this study, separating this group from entrepreneurship improved my estimates. I expected that entrepreneurial establishments had lower survival chances than incumbents, when holding everything else constant. The effect of entrepreneurship on establishment dissolution was a test of Stinchcombe's liability of newness principle.

Resource-sensitive Entrepreneurship. This variable accounted for the differences in resources between establishments who belong to single-unit and multiunit firms. I assumed that organizational structure – whether the establishment belongs to a single-unit or a multiunit firm – is a proxy for resources and assumed that multiunit firms have access to more resources. Based on whether the establishment is single-unit/multiunit and its entrepreneurship status, I created a variable with five categories. I differentiated between establishments that 1) belong to a single-unit incumbent, 2) belong to a multiunit incumbent, 3) belong to a single-unit new establishment, 4) belong to a multiunit new establishment, and 5) belong to establishments that got taken over by

a different firm. As takeovers were not the focus of my study, and the category was already small, I did not differentiate between them by access to resources. I used the measure of resource-sensitive entrepreneurship to assess the survival chances of multiunit entrepreneurs especially compared to single-unit incumbents and expect that they fare better than single-unit incumbents. The effect of resource-sensitive entrepreneurship on establishment dissolution served a test of the potential of newness thesis.

Competitive History. This variable measured the proportion of failed establishments in the same county in t-1, t-2, and t-3. I calculated a three-year average of these three measures and used it in further analyses to account for the intensity of recent historical competition and to smooth out the effect. I used counties over ZIP codes because legal constraints in the industry facilitate using them as geographical units. I used this variable to assess the effect of recent location-based competitive history on current-time establishment failure and expected there to be a positive relationship, everything else constant.

Fluctuation in competitive history. I calculated the standard deviation of the competitive history measure. After taking into account the 3-year historical establishment failure variables, I calculated the standard deviation of these three values. Larger numbers on this historical fluctuation measure indicated that the industry went through sudden shakeouts that leveled out quickly. I expect that its effect on current-time establishment failure is a negative one.

Controls

Current-time Competition. I used the number of wholesaler establishments within the same county as a measure of current-time competition. I centralized this measure. I expected to observe a positive relationship, which would mean that increasing competition above average is associated with higher hazards of failure. *Payroll.* I used a logged version of employee payroll and expected

to see a positive relationship between hazards of exit. *Employment*. I used a logged version of the number of employees variable to assess the effect of entrepreneurship on establishment survival, net of the effect of establishment size. In administrative data, entrepreneurship historically has been measured as the establishments that employed a small number of employees. However, entrepreneurship, as I defined it above, varies on employment size. I expected to see hazards of failure decrease as employment goes up. Employment and payroll were the only variables that had occasional missing values. I used linear interpolation by plants to impute these missing values. This decision did not change the results significantly as the number of imputed values is negligible, it constituted less than 0.001% of the overall sample.

Research design controls: *Organizational age*. Although the LBD dataset did not contain information on the founding dates of organizations that were on the market before the data collection started in 1976, I use the information available to create two categories of establishments that entered the market before the examined period. I distinguish between establishments that started out before 1976 and between 1976–1983. I expected that organizational tenure negatively affects the hazards of market exit and that the oldest organizations have the lowest hazards of failure. *Wholesaler*. This variable differentiated establishments by operation type. Its value was 1 if the establishment was a merchant wholesaler, 0 otherwise. Otherwise included categories such as own brand importer and marketer, manufacturers' sales branches and offices, and agents.

Analytic methods

Parametric survival methods constitute the standard for investigating hazards of market entry and exit in the discipline of strategic management (Dahl and Sorenson, 2012; Hiatt, Sine, and Tolbert, 2009; Stuart and Sorenson 2003). These methods have no problem of accounting for time-varying explanatory variables and in my case, yearly data for thirty-one consecutive years is

so much that I can safely ignore the discreteness of the data structure (Allison, 2014). Moreover, compared to Cox regression and discrete methods, they can easily handle left censoring which is substantial in my data. I prefer a piecewise exponential formulation because, as opposed to regular parametric models that force the hazard function to take a specific shape, the hazard is assumed to be constant within the pre-specified survival time intervals, but the constants may differ for different intervals (Cleves et al., 2016). By splitting time into discrete intervals that coincide with the yearly business circle, I can account for potential differences in data collection and data quality.

As my dataset is establishment-year level, I had to control for unobserved firm-level factors and correct the establishment-level point estimates. The ideal would be to incorporate indicators for quality of firms as explanatory variables explicitly. Unfortunately, this is rather unrealistic. Thus, I expand the hazard model to include firm-level random effects. With a disturbance term representing the unobserved sources of firm-level frailty with a gamma distribution (ζ_j), I accounted for the quality differences among firms. The effect of firms is assumed to be random and have a multiplicative effect on the hazard function (Cleves et al., 2016). Explaining away firm-level differences enables me to detect true establishment-level effects.

I investigated the following piecewise exponential model:

$\ln\{h(t|d_{si}, x_i, \zeta_j)\} = \alpha_1 d_{1si} + \alpha_2 d_{2si} + \dots + \alpha_{27} d_{27si} + \beta_2 x_{2i} + \beta_3 x_{3i} + \dots + \beta_k x_{ki} + \zeta_j$, where the baseline hazard $h_0(t) = \exp(\alpha_1 d_{1si} + \alpha_2 d_{2si} + \dots + \alpha_{31} d_{31si})$ was the hazard when all covariates are zero ($x_i = 0$), and ζ_j is a firm-specific random-intercept with a mean of 0 and gamma variance (Rabe-Hesketh and Skrondal, 2012:311). The main relationships of interest were:

$\beta_1 \text{reship}_{si} + \beta_2 \text{comphistory}_{si} + \beta_3 \text{fluchistory}$ and two interaction terms:

$\beta_4 \text{reship} * \text{comphistory} + \beta_5 \text{reship} * \text{fluchistory}$, testing whether establishment dissolution depends on resource-sensitive entrepreneurship (*reship*), competitive history (*comphistory*), fluctuation in

competitive history (*fluchistory*), and the differential effect of competitive history and historical fluctuation on establishment dissolution by resource-sensitive entrepreneurship (*reship*comphistory* and *reship*fluchistory*, respectively).

The sample had approximately 80,000⁴ establishment-year observations. The dataset was in an establishment-year format which makes it feasible to allow covariates to vary each year. As the main independent variables are of this sort – an establishment goes through phases in which it is considered entrepreneurial, but over time it becomes an incumbent or gets taken over – using the dataset in the long format was necessary. One methodological novelty in my models compared to work in population ecology was that besides conditioning the survival models on organizational age, I also included industry time (calendar years) in my models. This way, I was not only able to investigate effects of organizational life phases, but also compare establishments to each other who were part of the risk set in each calendar year.

My analytical approach was the following. I started with a baseline model predicting the hazards of failure and only included the control variables. All the further models included these controls variables as well. All models also included firm-level random intercepts with gamma frailty. In model 2, I tested the association between entrepreneurship and hazard of failure, in other words, Stincombe's liability of newness thesis. Model 3 accounted for the relationship between resource-sensitive entrepreneurship and market exit. With this model, I tested the potential of newness thesis. I summarized results of these models in Table 4.

Building on the potential of newness effect, I further investigated the historical industry conditions in which this effect manifests. I presented these results in Table 5. Model 4 introduced tests on the relationship between competitive history and market exit, and fluctuations in

⁴ The exact number cannot be disclosed.

competitive history and market exit. Model 5 added an interaction term to assess how the effect of history on market exit works differently for different categories of relationship-sensitive entrepreneurship. Model 6 added an interaction term between shakeouts and resource-sensitive entrepreneurship. When nested, I compared the models presented in the tables using Akaike Information Criteria (AIC), Bayesian Information Criteria (BIC), and log likelihood tests to decide whether including new focal independent variables enhances the explanatory potential of the models.

Results

Detailed descriptive statistics are available in Table 2. Table 3 presents the correlation matrix among variables. Note that there is a strong positive correlation between measures of competitive history and fluctuation in competitive history, furthermore between the logged values of employment and payroll. Table 4 presents results testing the potential of newness thesis in three models (Models 1-3), Table 5 presents findings on the historical conditions for the potential of newness, while Table 6 compares the historical conditions for the liability and the potential of newness. In the piecewise exponential framework, the exponentiated coefficients represent hazard ratios of failure (Rabe-Hesketh and Skrondal, 2012: 820). I report them along with 95% confidence intervals.

Table 2: Descriptive statistics for variables used in analysis

	Mean / proportion	SD
<i>Focal variables</i>		
Establishment dissolution	0.09	0.29
Incumbent (reference)	0.79	
Entrepreneurship	0.17	
Establishment takeover	0.04	
Multiunit entrepreneur (reference)	0.02	
Single-unit incumbent	0.55	
Multiunit incumbent	0.24	
Single-unit entrepreneur	0.15	
Establishment takeover	0.04	
Competitive history	0.07	0.09
Fluctuation in competitive history	0.08	0.11
<i>Controls</i>		
Current-time competition	0.00	8.38
Logged employment	2.78	1.34
Logged payroll	5.90	1.98
<i>Research Design Controls</i>		
Founded after 1983 (reference)	0.37	
Founded between 1976-1983	0.17	
Founded before 1976	0.46	
Other type of wholesaler (reference)	0.06	
Merchant wholesaler	0.94	

Sample: beer wholesaler establishments (NAICS 424810); N=~80,000

Source: Longitudinal Business Database, 1983-2013

Table 3: Correlation table for variables used in analysis

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1 Establishment dissolution	1														
2 Single-unit incumbent	-0.07	1													
3 Multiunit incumbent	-0.07	-0.63	1												
4 Single-unit entrepreneur	0.19	-0.46	-0.23	1											
5 Multiunit entrepreneur	-0.01	-0.15	-0.08	-0.06	1										
6 Establishment takeover	-0.02	-0.23	-0.12	-0.09	-0.03	1									
7 Competitive history	0.06	-0.17	-0.05	0.26	0.07	0.00	1								
8 Fluctuation in competitive history	0.03	-0.15	-0.02	0.20	0.08	0.01	0.82	1							
9 Current-time competition	0.08	-0.06	-0.07	0.18	0.00	-0.01	0.26	-0.01	1						
10 Logged employment	-0.26	0.08	0.21	-0.40	-0.01	0.06	-0.04	-0.04	-0.08	1					
11 Logged payroll	-0.32	0.09	0.18	-0.36	-0.01	0.05	-0.04	-0.01	-0.10	0.88	1				
12 Merchant wholesaler	-0.01	0.15	-0.09	-0.08	-0.04	-0.02	-0.08	-0.06	-0.04	0.02	0.04	1			
13 Founded after 1983	0.14	-0.36	-0.04	0.48	0.14	0.03	0.22	0.17	0.11	-0.24	-0.21	-0.10	1		
14 Founded before 1976	-0.02	0.03	0.05	-0.10	-0.02	0.00	-0.06	-0.05	0.00	-0.02	-0.04	0.02	-0.35	1	
15 Founded between 1976-1983	-0.12	0.32	0.00	-0.38	-0.12	-0.03	-0.17	-0.13	-0.11	0.25	0.23	0.08	-0.70	-0.42	1

Sample: beer wholesaler establishments (NAICS 424810); N=~80,000

Source: Longitudinal Business Database, 1983-2013

The potential of newness

Presented in Table 4, Model 1 only includes control variables. This model validates my modeling choice of piecewise exponential models because it shows that there are significant differences between the survival chances of establishments in different calendar years. My qualitative knowledge of the industry would have predicted that 2002 and 2006 were the two toughest years in the industry, which is the case. Model 2 confirms the Baseline (Hypothesis 1), establishing that all else constant, entrepreneurs have a higher chance of establishment failure compared to industry incumbents in any given year ($p < 0.01$). Takeover establishments do not have lower hazards of exit compared to incumbents, but a post-estimation test reveals that they do have lower hazards of exit compared to entrepreneurs ($p < 0.01$). This latter finding highlights that distinguishing between these two categories in my operationalization was a suitable decision.

In model 3, I account for the resources of establishments and test the liability of newness thesis. I find that at any given year, the hazard of failure for multiunit entrepreneurs is lower than single-unit entrepreneurs (post estimation F-tests, $p < 0.001$), which confirms Hypothesis 2a and highlights that the single-unit multiunit differentiation is a good proxy for being resource-rich. The coefficients from the table also support Hypothesis 2b, outlining a survival advantage of multiunit entrepreneurs compared to both single-unit ($p < 0.001$) and multiunit incumbents ($p < 0.05$). If I sort the categories of the resource-sensitive entrepreneurship variable based on the order of the largest expected organizational tenure: in any given year, multiunit incumbents have the lowest hazard of exit, followed by multiunit entrepreneurs, single-unit incumbents, and single-unit entrepreneurs. Overall, these models show that Stinchcombe's liability of newness can get suspended and certain new entrants – multiunit entrepreneurs – can have better survival chances than both single-unit and multiunit incumbents in dynamic market contexts. Model fit statistics also support this finding: log likelihood tests, BIC and AIC scores all confirm that the model 3 fits the data best.

Table 4: The potential of newness
 Piecewise exponential models predicting the hazard ratios of establishment failure

	Model 1 Baseline	Model 2 Liability of newness	Model 3 Potential of newness
<i>Focal variables</i>			
Incumbent (reference)			
Entrepreneurship		1.16 ** [1.05-1.28]	
Establishment takeover		0.80 ** [0.69-0.93]	
Multiunit entrepreneur (ref)			
Single-unit incumbent			1.72 *** [1.39-2.14]
Multiunit incumbent			1.27 * [1.02-1.58]
Single-unit entrepreneur			1.89 *** [1.55-2.31]
Establishment takeover			1.26 [0.98-1.61]
<i>Controls</i>			
Current-time competition	1.01 *** [1.01-1.01]	1.01 *** [1.01-1.01]	1.01 *** [1.01-1.01]
Logged employment	1.35 *** [1.29-1.42]	1.36 *** [1.30-1.43]	1.40 *** [1.34-1.46]
Logged payroll	0.56 *** [0.54-0.57]	0.56 *** [0.54-0.57]	0.55 *** [0.54-0.57]
<i>Research Design Controls</i>			
Founded after 1983 (ref)			
Founded between 1976-1983	0.91 * [0.83-0.99]	0.93 [0.84-1.02]	0.93 [0.85-1.03]
Founded before 1976	0.82 *** [0.76-0.89]	0.85 *** [0.78-0.93]	0.84 *** [0.77-0.91]
Merchant wholesaler (ref)			
Other type of wholesaler	1.33 *** [1.18-1.49]	1.32 *** [1.17-1.48]	1.23 *** [1.10-1.38]
Constant	1.34 * [1.01-1.77]	1.29 [0.97-1.72]	0.85 [0.60-1.19]
Establishment tenure dummies	YES	YES	YES
Year dummies	YES	YES	YES
Firm-level gamma frailty	YES	YES	YES
Log likelihood	-10048	-10037	-9984
AIC	20231	20214	20112

BIC	20863	20864	20780
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* p < 0.05, ** p < 0.01, *** p < 0.001. Table reports hazard ratios with 95% CIs.
Sample: beer wholesaler establishments (NAICS 424810);
N=~80000
Source: Longitudinal Business Database, 1983-2013

The historical conditions for the potential of newness

Model 4 reveals that historical conditions of market competition are positively associated with hazards of current-time establishment failure. The more competition-laden the history of the local market is, the larger the hazards of current-time market exit, as Hypothesis 3a predicted (p<0.01). This same model brings evidence to support Hypothesis 3b as well (p<0.05). It reveals a negative relationship between fluctuation in historical competitive pressure and hazards of market exit, all else constant. In this model, the strength and statistical significance of the finding that multiunit entrepreneurs have lower hazards of failure than single-unit incumbents do not change. However, the model fit statistics show that this model is only slightly better than model 3 from Table 4.

Table 5: The historical conditions for the potential of newness
Piecewise exponential models predicting the hazard ratios of establishment failure

	Model 4 Competitive history	Model 5 Competitive History * Potential of newness	Model 6 Historical fluctuation * Potential of newness
<i>Focal variables</i>			
Multiunit entrepreneur (reference)			
Single-unit incumbent	1.72 ** * [1.38-2.13]	1.29 [0.99-1.69]	1.34 * [1.69-1.73]
Multiunit incumbent	1.27 * [1.02-1.58]	1.01 [0.77-1.33]	1.05 [0.80-1.36]

Single-unit entrepreneur	1.88 ** *	1.55 ** *	1.52 ** *
	[1.54-2.30]	[1.20-2.00]	[1.19-1.94]
Establishment takeover	1.26 [0.98-1.61]	1.00 [0.73-1.38]	1.04 [0.77-1.41]
Competitive history	1.88 ** [1.20-2.93]	0.18 [0.03-1.20]	1.88 ** [1.20-2.93]
Fluctuation in competitive history	0.65 * [0.45-0.92]	0.64 * [0.45-0.92]	0.09 ** [0.02-0.41]
Multiunit entrepreneur *			
Competitive history (ref)			
Single-unit incumbent		23.78 ** [3.45-164.0]	
Multiunit incumbent		9.604 * [1.28-72.10]	
Single-unit entrepreneur		8.269 * [1.23-55.66]	
Establishment takeover		9.655 [0.75-124.5]	
Multiunit entrepreneur *			
Fluctuation in competitive history (ref)			
Single-unit incumbent			11.54 ** [2.50-53.29]
Multiunit incumbent			4.918 [0.99-24.34]
Single-unit entrepreneur			6.763 * [1.50-30.43]
Establishment takeover			6.760 [0.67-36.93]
<i>Controls</i>			
Current-time competition	1.01 ** *	1.01 ** *	1.01 ** *
	[1.00-1.01]	[1.00-1.01]	[1.00-1.01]
Logged employment	1.40 ** *	1.40 ** *	1.40 ** *
	[1.34-1.47]	[1.34-1.47]	[1.34-1.47]
Logged payroll	0.55 ** *	0.55 ** *	0.55 ** *
	[0.54-0.57]	[0.54-0.56]	[0.54-0.56]
<i>Research Design Controls</i>			
Founded after 1983 (ref)			
Founded between 1976-1983	0.94	0.95	0.94

	[0.85-1.03]		[0.86-1.04]		[0.86-1.03]	
Founded before 1976	0.84	** *	0.85	** *	0.84	** *
	[0.77-0.92]		[0.78-0.93]		[0.77-0.92]	
Merchant wholesaler (ref)						
Other type of wholesaler	1.23	** *	1.23	** *	1.23	** *
	[1.09-1.38]		[1.09-1.38]		[1.09-1.38]	
Constant	0.84		1.07		1.05	
	[0.60-1.18]		[0.73-1.55]		[0.73-1.51]	
Establishment tenure dummies	YES		YES		YES	
Year dummies	YES		YES		YES	
Firm-level gamma frailty	YES		YES		YES	
Log likelihood	-9980		-9970		-9972	
AIC	20108		20096		20100	
BIC	20795		20820		20825	

Table reports hazard ratios with 95% confidence intervals. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Sample: beer wholesaler establishments (NAICS 424810);

N=80,000

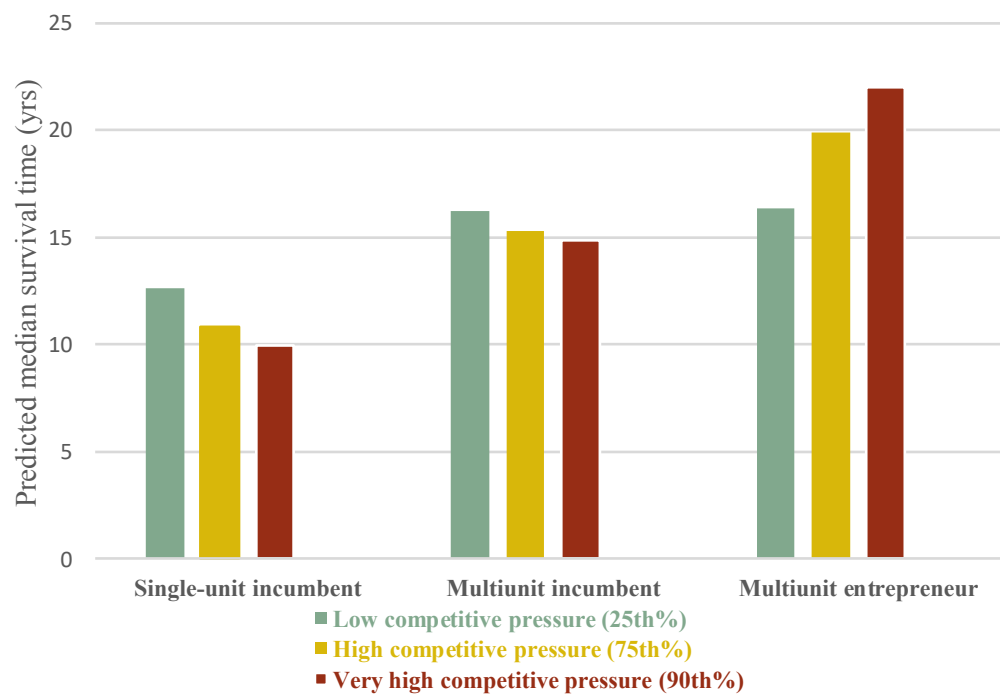
Source: Longitudinal Business Database, 1983-2013

We obtain better model fit statistics in models 5 and 6, compared to model 3, when we introduce the two competitive pressure effects as part of an interaction term and look at the differential effect of historical conditions on establishment dissolution by different forms of resource-sensitive entrepreneurship. In model 5, I introduce the interaction term between historical competitive pressure and resource-sensitive entrepreneurship. Results show that the positive effect between competitive history and current-time market exit that we observed in model 4 only applies to single-unit incumbents ($p < 0.001$). These establishments exit at a higher rate in counties where the recent historical industry context is competitive. These results support Hypothesis 4b.

In figure 4, I visualize results of the historical conditions of the potential newness based on model 5. In the presentation, I focus on the theoretically important three categories: single-unit incumbents, multiunit incumbents, and multiunit entrepreneurs. I predict their median survival time based on model 5 at three values of competitive history: the 25th, 75th, and 90th percentiles. If

we compare multiunit entrepreneurs either to incumbent multiunit or single-unit establishments who operate in similar countries in terms of historical competitive pressure, we can see that while none of these three categories differ in their predicted hazards of market exit when historical pressure is low, disparities emerge at higher levels. When historical pressure is high, multiunit entrepreneurs have the lowest hazards of market exit. For example, when historical pressure is at its 75th percentile, the hazards are significantly lower compared to single-unit incumbents ($p<0.001$) and multiunit incumbents ($p<0.05$) as well.

Figure 4: Historical conditions of the potential of newness. Predicted median survival time



Source: Longitudinal Business Database. Estimates based on Model 5. All other variables are held at their mean. $N \sim 80,000$

Model 6 is an extension of model 4, as it adds an interaction term between the fluctuation of competitive pressure and resource-sensitive entrepreneurship. Recall that model 4 showed that if there is a shakeout, the hazards of establishment effect go down. The results from this current model indicate that this shielding effect of shakeouts is the most pronounced for multiunit

entrepreneurs and at especially high levels of historical fluctuation, supporting Hypothesis 4c. If we compare multiunit entrepreneurs either to incumbent multiunit or single-unit establishments who operate in counties similar in terms of historical fluctuation, we can see that while none of these three categories differ in the hazards of market exit when the historical fluctuation is low, disparities emerge at higher levels.

Robustness checks

In this section, I present model fit statistics and consider alternative explanations for the associations highlighted in the results section. I compare models using log likelihood tests, AIC, and BIC scores to decide whether by including new predictor variables enhances the explanatory potential of the models. As the values of AIC go down by more than 10, and the log likelihood gets smaller as well, I can conclude that besides its theoretical importance, model 6 fits the data best. Note that the levels of BIC do not indicate a significantly better model fit for model 5 and 6 compared to model 4 because the formula of BIC disadvantages less parsimonious models.

To assess whether modeling unobserved quality differences with firm-specific random intercepts was a reasonable decision, I look at the likelihood-ratio statistic and corresponding hypothesis test. Its significance ($p < 0.001$) indicates that the intercept does vary between firms to a certain degree and accounting for this heterogeneity was a plausible decision. These results bring evidence that using firm-specific random intercepts was a solid modeling choice.

As a robustness check, I compare two models. In one, the historical competitive pressure is interacted with entrepreneurship (model 7), while I repeat the interaction model with resource-sensitive entrepreneurship (model 5). This way, I compare the historical conditions of the liability and potential of newness. When interpreting model 5 above, we concluded that under high levels of historical pressure, multiunit entrepreneurs have the lowest hazards of market exit. When we do

not distinguish between new entrants based on their organizational structure, we do not see this switch: model 7 shows that high pressure leads to establishment exit for incumbents and entrepreneurs alike. At lower levels of historical pressure, the hazards of establishment dissolution go down at a higher rate for industry incumbents. The result that the pressure effect is more pronounced for incumbents supports the baseline expectation of Hypothesis 4. However, the fact that the model fit statistics unanimously favor model 5 over model 7 indicates that models that account for the organizational structure of establishments better represent the data.

Table 6: Comparison of the historical conditions for the potential of newness
Piecewise exponential models predicting the hazard ratios of establishment failure

	Model 5 Potential of newness * Historical competition	Model 7 Liability of newness * Historical competition
<i>Focal variables</i>		
Incumbent (reference)		
Entrepreneurship		1.26 *** [1.12-1.41]
Establishment takeover		0.83 * [0.69-1.01]
Multiunit entrepreneur (ref)		
Single-unit incumbent	1.29 [0.99-1.69]	
Multiunit incumbent	1.01 [0.77-1.33]	
Single-unit entrepreneur	1.55 *** [1.20-2.00]	
Establishment takeover	1.00 [0.73-1.38]	
Competitive history	0.18 [0.03-1.20]	3.33 *** [1.91-5.80]
Fluctuation in competitive history	0.64 * [0.45-0.92]	0.60 ** [0.42-0.86]
Incumbent * Competitive history (ref)		
Entrepreneurship		0.44 ** [0.26-0.73]

Establishment takeover			0.56	
			[0.09-3.32]	
Multiunit entrepreneur *				
Competitive history (ref)				
Single-unit incumbent	23.78	**		
	[3.45-164.0]			
Multiunit incumbent	9.604	*		
	[1.28-72.10]			
Single-unit entrepreneur	8.269	*		
	[1.23-55.66]			
Establishment takeover	9.655			
	[0.75-124.5]			
<i>Controls</i>				
Current-time competition	1.01	***	1.01	***
	[1.00-1.01]		[1.00-1.01]	
Logged employment	1.40	***	1.36	***
	[1.34-1.47]		[1.30-1.42]	
Logged payroll	0.55	***	0.56	***
	[0.54-0.56]		[0.54-0.57]	
<i>Research Design Controls</i>				
Founded after 1983 (ref)				
Founded between 1976-1983	0.95		0.94	
	[0.86-1.04]		[0.85-1.03]	
Founded before 1976	0.85	***	0.87	***
	[0.78-0.93]		[0.79-0.95]	
Merchant wholesaler (ref)				
Other type of wholesaler	1.23	***	1.31	***
	[1.09-1.38]		[1.17-1.47]	
Constant	1.07		1.24	
	[0.73-1.55]		[0.93-1.64]	
Establishment tenure dummies	YES		YES	
Year dummies	YES		YES	
Firm-level gamma frailty	YES		YES	
Log likelihood	-9970		-10028	
AIC	20096		20204	
BIC	20820		20891	

* p < 0.05, ** p < 0.01, *** p < 0.001. Table reports hazard ratios with 95% CIs.

Sample: beer wholesaler establishments (NAICS 424810); N=80,000

Source: Longitudinal Business Database, 1983-2013

The most significant issue with my models is the use of endogenous variables. While acknowledging the problem, the sociological theories I build upon and the literature streams I

contribute to also theorize about the endogenous effect of history (Barnett, 2008). In the current model specifications, the actual causal effect of competitive history on establishment dissolution cannot be assessed; it would require the use of instrumental variables as an estimation method. However, the boundary conditions I unearth, under which the liability of newness can be suspended, can facilitate new research to pin down the causal effects in the relationship.

Another major issue with the paper is that I only use historical evidence and qualitative field observations to highlight the change in the logics of competition in the empirical field. The reason for it is that the producer-side of the beer market is currently not present in population-level economic data. Some smaller producers (microbreweries, brewpubs, and contract breweries) do not file under the ‘brewery’ industry code, which was invented to track large-scale facilities. Thus, in the administrative data, the increase in the number of producers is smaller than what the Brewers Association – the trade association representing the interests of smaller producers – report. Instead of defining the industry a priori using industry codes, future research needs to sample on existing contract agreements between producers and wholesalers. As an indirect test to pin down the underlying change in the logic of competition, I ran three models on subsets of the sample and judged the presence of this change by its effects. If I create three subsamples (1983-1991; 1992-2000; 2001-2014) and look at the interaction effect from model 5, they gradually become significant in the three periods, and it is strongest in the most recent subsample. Overall, this evidence can only act as a weak mechanism test and highlights the need for dyad-level research to trace the mechanism at work.

A competing mechanism to differential expectations could be selection; the idea that there is an initial quality difference between entrepreneurs who pursue different locational choices. To test this claim, I ran multinomial logit models predicting types of resource-sensitive

entrepreneurship as the dependent variable. All the independent variables are the same as in the main models. The results reveal that single-unit entrepreneurs are not statistically different from multiunit entrepreneurs when competitive pressure and historical fluctuation rises. These results suggest that a selection-based explanation has little grounding.

Discussion and conclusion

The presented models highlight how dynamics of organizational and historical competitive pressure affect entrepreneurship in an intermediary market segment. They show that the theorized change in relationship asymmetry affect intermediary entrepreneurs' survival chances in a way that is unexpected based on current theory. This paper argues that a change in the logic of competition on the market, in which producers are increasingly competing on product variety rather than competing solely on scale, can have important consequences in connected industry segments. The underlying change, however, cannot be understood based on economic theories of information asymmetry (Akerlof, 1970). These results are interpretable only if we accept that market relationships are social and that a change in the underlying social logic of market relationship – in which relationship between participants change from an overwhelmingly one-to-many-to-many to many structures – can have industry-changing consequences. In the analyzed case, changes in the logics of competition on the producer-side affected the payoff of being an intermediary entrepreneur because it was easier to create new market ties than to change old, socially embedded ones.

Results on the survival chances of entrepreneurs are consistent with Stinchcombe's liability of newness thesis as long as we do not account for firm structure. Once we distinguish between market entrants who are part of single-unit or multiunit firms, however, we can see that

Stinchcombe's liability of newness can get suspended and the survival chances of multiunit new entrants surpass incumbents'. Under certain conditions, newness can have bigger potential than predicted based on current theory.

One could argue that the generalizability of my empirical context is limited. Indeed, the legal restraint on vertical integration is an increasingly quaint industry structure. It took me a great deal of effort to find other markets with similar arrangements. Examples are U.S. markets for petrol, car manufacturing and dealership, the motion picture industry, retail commercial banking, the market for electric power, and the broiler industry. However, I argue that the mechanism I investigated is generalizable. This mechanism appears when there are orthogonal growth and consolidation trends in connected industry segments that fundamentally change the underlying social nature of market transactions.

A focus on the mechanism of differential expectations allowed me to contribute to the question why we still see intermediaries in many industries, despite the triumph of the free market idea over the 20th century and an overall strong push against government intervention in market processes. Moreover, this paper also highlighted the increasing heterogeneity within intermediaries, by offering boundary conditions based on organizational factors and geographically bounded competitive pressure that facilitate divergent outcomes across the group. Overall, findings highlight that we need to consider the social contracts underlying business relationships to understand the conditions for the continued relevance of intermediaries.

Overall, this paper shifted focus away from the 'intermediaries/brokers as actors who always win' perspective (Burt, 1992). Instead, they highlighted how an industry-wide change in the ecological conditions in a connected industry segment sort out winners and losers among intermediaries in unexpected ways (Sorenson and Waguespack, 2006). My research also proposes

a generalizable concept that highlights the context dependence of organizational behavior and contribute to the literature on organization theory and strategy. The potential of newness principle describes the capacity of organizations to strategically act upon industry conditions and leverage their positions to get ahead. This concept adds to the strategy literature on competitive advantage and dynamic capabilities (Teece et al, 1997).

More generally, the framework of this research allows us to think about how unequal embeddedness of market relationships can make or break organizations and contribute to organizational inequality. Literature demonstrated that competition works to the benefit of the highest status organizations: in many markets the rich get richer (Rigney, 2010). My results added to this perspective as they highlighted that different organizational characteristics do well in different contexts, especially if the rules of competition shift in the industry. For example, I showed that an industry-wide change has contributed to a change in the structure of market relationships that granted resource-rich new entrants access to new types of market ties that they achieved by setting up shop in areas where it is seemingly counterintuitive. Thus, my results contextualized the Matthew-effect and showed how the workings of competitive and organizational dynamics complicate the ‘rich get richer’ phenomenon. Furthermore, my results stressed the organization–environment fit and outlined boundary conditions to emphasize that organizational viability is context dependent (Barnett, 2008).

This paper highlighted the benefits of studying asymmetries in complementary business relationships but there is still room for future research. Studies should focus on inter-industry dynamics and consider multiple segments of the supply chain to investigate the underlying social logic of industry processes. Based on the markets as relations framework, I recommend theorizing about social mechanisms and their macro effects first and then finding data that enables the

researcher to track the effects of the mechanism. In this recommendation, economic sociology and organization theory – and their emphasis on the social embeddedness of the market relations – meets strategy research. The promise is that this perspective can shed new light on old research questions.

Intermediary organizations are not expected to go away. I predict that we will see similar moves to those we saw from beer wholesalers, from the intermediaries in the new economy and see their increased influence on legislation as well. Research in strategy and organization theory needs to explicitly theorize about the challenges these firms face, enumerate the strategies they adopt, and the boundary conditions under which they operate. Moreover, intermediaries need to be focal elements in research designs, not only present in ancillary research questions.

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Appendix A

Brewers and wholesalers on the prevalence of self-distribution

“at some point it gets to a size where you're running a logistics business first and a brewery second, which I don't want to do. I didn't get into this to be a logistics business. I don't know exactly what that number is, it kind of becomes: is it cheaper to hire somebody to drive a van?”

“So for now, we like the self-distribution. We will go to a distributor, I'm just not sure who, what, when, where, why. Well, I'll know. It's like porn, I can't really describe it but I'll know when I see it.”

“you can self-distribute in is your own home state and that's only up to a certain amount of barrels”

“It just depends. Every state and every market within every state and every distributor within every market, it's different. The drinkers are different. It's like Consumer Studies Nightmare 101, is figuring out what people are drinking regionally and it's different everywhere. What people drink in Philly is different than what people drink here and so on.”

“[a local microbrewery] is a really good example. They have a hundred and sixty accounts right now that they're self-distributing to. So they are building their brand and they're the distributor so who knows in a year or two if a distributor's going to be like well we want your brand, oh well it's three-million dollars. That's what [a brewery in a Southern state], I know the guy down there pretty well and they self-distributed for three or four years and they got their total self-distribution up to like nine-thousand barrels which is a lot of beer moving around by yourself, they got trucks and all that. He just sold his rights this year for three-million. A check for a million dollars, he's like alright I don't have to distribute anymore who wants to buy some trucks.”

“They introduce people making beer to people selling beer and that's something we need to get more, I mean we try to make our rounds but we also busy running a small business that we own”

“Interviewer: Have you been approached by distributors locally?”

Respondent: A couple of small ones. We always run into [local small distributor]. He always says, ‘Whenever you're ready, come to us. We'll build your brand. That's what we do. We build brands’”